

Department of Environmental Protection

FY09 Performance Plan

Contribution to Montgomery County Results

A Responsive and Accountable County Government
An Effective and Efficient Transportation Network
Healthy and Sustainable Communities
A Strong and Vibrant Economy
Vital Living for all of Our Residents

Contribution of DEP

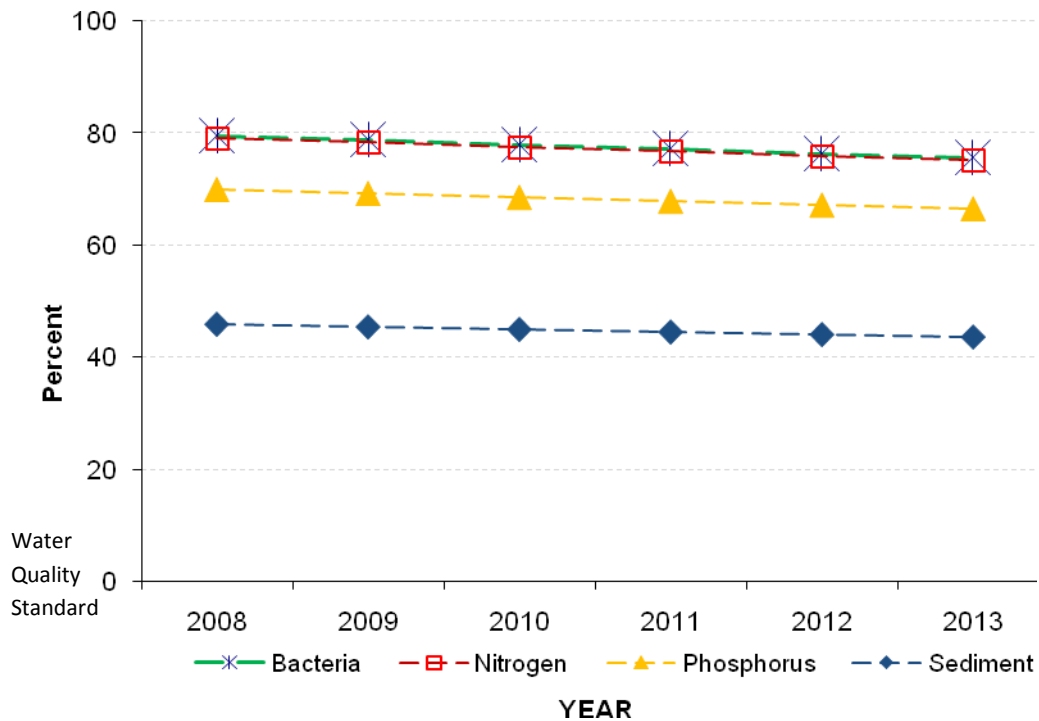
What DEP Does and For Whom	How Much
Overall The mission of the Department of Environmental Protection is to: Protect and enhance the quality of life in our community through the conservation, preservation, and restoration of our environment guided by the principles of science, resource management, sustainability and stewardship; and to provide solid waste management services including recycling in an environmentally progressive and economically sound manner.	FY09 Budget: \$117,539,600 <u>Workyears</u> : 209.7 <u>Solid Waste Fund</u> : \$106,126,230 <u>WQPC</u> : \$7,011,830 <u>General Fund</u> : \$4,401,540
Watershed Management <ul style="list-style-type: none">• Monitor Water Quality• Inspect and Maintain Stormwater Facilities• Watershed Restoration	FY09 Budget: \$9,201,777 (7.8% of budget) Workyears: 31.0
Policy and Compliance <ul style="list-style-type: none">▪ Enforce environmental regulations▪ Analyze, develop and recommend environmental policies related to:<ul style="list-style-type: none">- Environmental Sustainability- Energy Conservation- Forest Conservation- Air Quality- Noise	FY09 Budget: \$1,523,796 (1.3% of budget) Workyears: 14.4 Note: 4.5 WYs related to enforcement is charged to DSWS and \$560K is budgeted in the Climate Protection NDA

What DEP Does and for Whom ~contd.	How Much
<p>Water and Wastewater Management</p> <ul style="list-style-type: none"> Analyze, develop, recommend, and implement water supply and wastewater disposal service policies, in coordination with land use planning and utility services, through the County's comprehensive plan Analyze, develop, and recommend regional, and local wastewater and water supply policies Develop groundwater protection policies 	<p>FY09 Budget: \$687,797 (0.6% of budget) Workyears: 5.6</p>
<p>Solid Waste Services</p> <ul style="list-style-type: none"> Collect, process, and manage refuse generated in Montgomery County <ul style="list-style-type: none"> Refuse collection to sub district A – 90,239 homes. Process and dispose refuse from 210,000 homes, 110,000 multi-family, and over 65% of 35,000 businesses Oversee residential and commercial recycling <ul style="list-style-type: none"> Collect residential recyclables county wide 210,000 homes. Facilitate and enforce recycling to 35,000 businesses and 110,000 multifamily residents Administer leaf vacuuming fund <ul style="list-style-type: none"> Two rounds of fall leaf collections to 118,871 residents; (actual service provided by DOT / Highway Services) 	<p>FY09 Budget: \$64,703,000 (55% of budget) Workyears: 60.1 FY09 Budget: \$35,055,370 (30.8% of budget) Workyears: 46.4 FY09 Budget: \$5,277,860 (4.5% of budget) Workyears: 52.2</p>

Performance

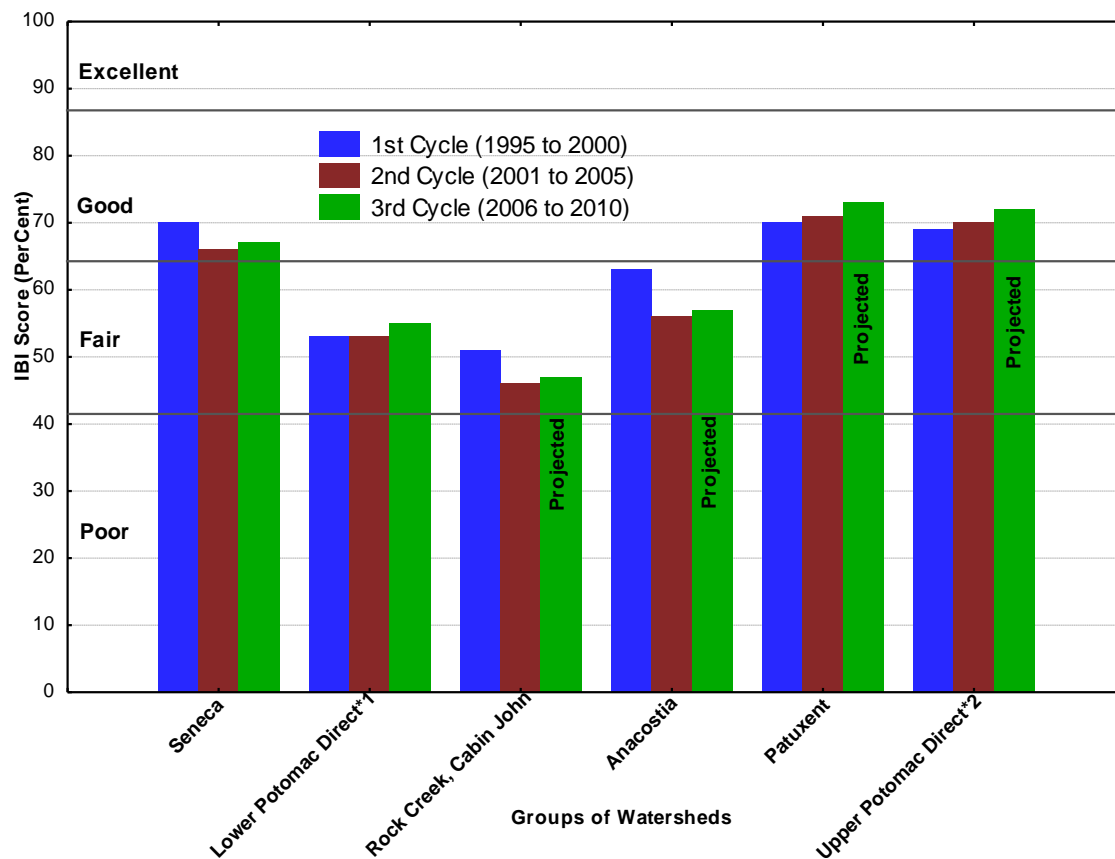
A. Improvement in Watershed Health

Measure 1: Percent Reduction of Pollutant Level Needed to Meet Water Quality Standards



The first measure plots progress toward achieving water quality standards for four pollutants (A-1). The County's new stormwater permit sets the specific standard for each pollutant and requires the County to show progress toward achieving these standards within the five year permit cycle.

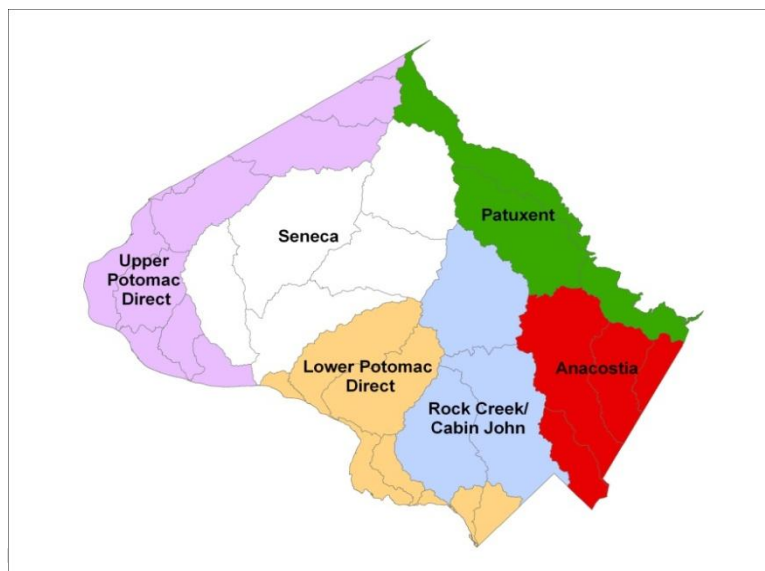
Measure 2: Improvement in County Watersheds' Biological Conditions



The second measure shows the biological health of the County's watersheds as determined by the Index of Biological Integrity (IBI), which formally classifies the watershed based on the diversity of the plant and animal life and other factors. A higher score indicates a higher quality watershed.

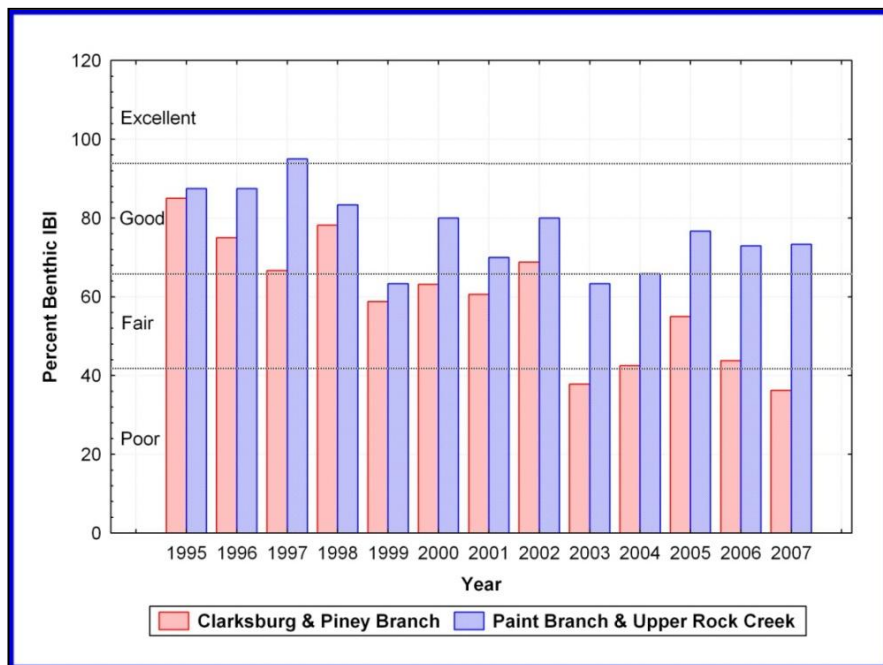
1* Includes Muddy Branch, Watts Branch, Rock Run and Little Falls

2* Includes Little Bennett, Bennett, Little Monocacy, Fahrney Branch, Furnace Branch, Broad Run and Horse Pen Branch



Map of the six groups of County watersheds monitored every five years. Monitoring sites are selected so that stations represent landuses within the larger area (urban, forested, and agricultural).

SubMeasure 1. Biological Conditions in Special Protection Areas (SPA)— Comparison Between Areas with Intense Development and Limited Development



In Clarksburg and Piney Branch SPA (red), development has resulted in approximately 20 percent or higher imperviousness. In Paint Branch and Upper Rock Creek SPA (blue), zoning limits new development to 8 percent total imperviousness. Clarksburg and Piney Branch SPA watersheds with higher imperviousness are consistently lower in IBI scores, and demonstrate declining trends at greater rates, when compared with Paint Branch and Upper Rock Creek SPA watersheds.

The submeasure displays the monitoring results in the county's four Special Protection Areas (SPA) where monitoring is conducted annually. SPAs are areas of the County where existing water resources and other environmental features are of high quality or unusually sensitive, and where proposed land uses might threaten those resources or features.

Story Behind the Performance

What constitutes good performance for this measure?

- Reduce key pollutant levels down to Water Quality Standards. Zero represents achievement of the Water Quality Standard for each pollutant.
- Measurable annual improvement in the overall health or integrity of the biological communities in county watersheds as shown by an increase in the IBI score of Measure A-2.
- Improved IBI scores in all Special Protection Area watersheds.

Contributing Factors

- Dry years reduce storm flows and may result in a temporary reduction in pollutant loads.
- New development and redevelopment codes/regulations are in place that require more stringent stormwater management. This improves runoff quality and reduces pollutant loads (but has not prevented some watershed degradation).
- The Stormwater Facilities Inspection and Maintenance Program funded by the Water Quality Protection Charge (WQPC) uses the County's technical resources, qualified personnel, and equipment, to streamline the essential, regular maintenance of stormwater management facilities on both public and private land. This program is critical to meeting NPDES permit goals by

ensuring that stormwater management facilities throughout the county are operating as designed to reduce stormflow volumes and pollutants loads.

Restricting Factors

- Pollutant loading from federal/state properties, neighboring jurisdictions, and others over whom we have no control significantly impact water quality.
- As development increases, the additional imperviousness disrupts natural hydrology and negatively impacts water quality, often even in spite of more stringent stormwater controls associated with new development.
- Given the historically urban nature of some of Montgomery County's watersheds and the associated nonpoint source pollution from stormwater, human population, construction, and urban land-based activities, it is realistic to assume that meeting water quality standards will be a challenging and resource-intensive process.
- Wet years increase stormflow runoff and may result in a temporary increase in pollutant loads.
- Drought, severe weather and other natural events are beyond the County's control but can adversely affect the biological sampling results (IBI scores).
- Increases in the number of stormwater management facilities in the County will increase the WQPC needed to cover their inspection and maintenance.
- Limited data are currently available to verify pollutant load reduction estimates and models are not always accurate.
- New requirements for additional pollutants with regulatory limits are likely to be added by the state (e.g., trash).

What We Propose To Do To Improve Performance in the Next Three Years:

Implementation Strategy

The National Pollutant Discharge Elimination System (NPDES) Permit drives Measures A-1 and A-2. The County is in the tentative determination phase for the third round of the permit, which was first issued by the Maryland Department of the Environment (MDE) to Montgomery County in 1996. The reissued permit will cover the years 2009–2014 and will require the County to, among others, show progress in meeting water quality standards, and provide stormwater controls for a total of 30 percent of impervious acres not previously controlled to the maximum extent practicable.

DEP has been, and will continue to use the following watershed restoration techniques to meet permit goals:

- Non-structural techniques (green roofs, downspout disconnection, rain gardens, bioswales, and other low-impact development (LID) techniques)
- Structural retrofitting (upgrading existing stormwater management structures and installing new such structures), and
- Stream restoration (stream bank and channel stabilization)

Steps to achieve the permit goals are as follows:

Step 1: **Develop** Plan within one year of permit issuance

- Identify projects, programs, monitoring and funding needed
- Develop schedule for monitoring, tracking, and implementation to meet restoration and pollutant reduction goals

Step 2: **Implement** plan over five-year permit term

Step 3: **Collect** data and track results of watershed restoration techniques

Step 4: **Evaluate** and **modify** plan according to scheduled intervals using data collected

Step 5: **Report** annually on implementation progress and stream resource improvements

- Implement the requirements of the NPDES permit as outlined above.
- Complete restoration projects in Turkey Branch and Hollywood Branch to meet the 10 percent impervious surface control required from the previous NPDES permit.
- Implement stormwater control projects on an additional 20 percent of the County's impervious surface without adequate, existing stormwater controls. Per current law and the new permit, non-structural, LID projects will be preferred wherever practical.
- Increase the number of facilities inspected and maintained in the Stormwater Maintenance and Inspection Program to keep up with growth and reduce the number of facilities waiting to be accepted into the program.

***Innovation
(Existing)***

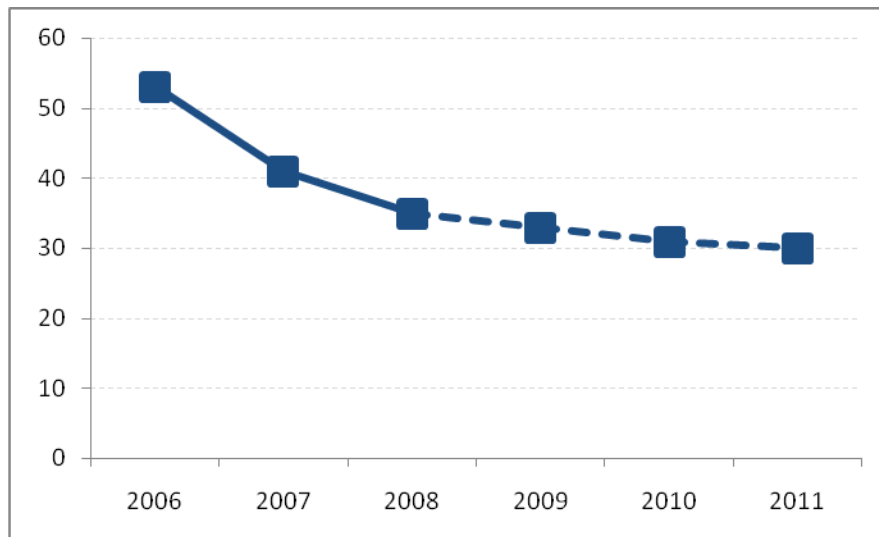
- DEP coordinated and facilitated discussions on the draft version of the NPDES permit with regional environmental groups (Chesapeake Bay Foundation, and National Audubon Society), as well as County stakeholders (Stormwater Partners), and worked with MDE, to ensure that the permit conditions were acceptable to the stakeholders, the County and the State.
- The SPA Report was reformatted to make the recommendations and results of the monitoring easily understandable to the non-technical reader.
- DEP's IT staff are improving the accuracy of the GIS-based County impervious surface data on which the WQPC is calculated.
- The RainScapes Rewards program, which cost-shares the installation of techniques to capture and treat stormwater on private property in dense, urban settings, is a national model.
- DEP's stream restoration engineers have been, and will continue to work closely with Washington Suburban Sanitation Commission (WSSC) to improve sewer infrastructure along stream valleys, which reduces flash pollution incidents and bacteria leaking into the stream systems from sewer pipes.

(Proposed)

- Increase tree canopy by improving coordination with and agreements between DEP and Department of Transportation's (DOT) Street Tree Program. Tree canopy intercepts a significant amount of rainfall and reduces stormwater volume. Tree root structures are also essential for soil stability and improving water quality.
- Develop and implement a comprehensive trash reduction strategy. Trash reduction requirements will be included in the new permit.
- Coordinate with DPS to reduce the time for converting sediment and erosion controls—used in the land development/construction process—to stormwater best management practices (BMPs).
- DEP will increase monitoring of BMPs in the SPAs and other areas to better track their effectiveness. DEP will also make the monitoring results more available to the public through the redesign of its public Web site.

B. Environmental Code Enforcement and Compliance Measures

Measure 3: Average Number of Days to Resolve Environmental Enforcement Cases



	FY2006		FY2007		FY2008	
Case Type	Cases	Average Case Length (days)	Cases	Average Case Length (days)	Cases	Average Case Length (days)
Ambient Air Violations of Ch. 3, e.g. smoke from restaurants, dust from construction sites, burn permits	276	46	219	49	193	36
Hazardous Material e.g. response to help oversee clean-up of fuel spills for traffic accidents, improper storage of chemicals	49	50	49	37	59	15
Indoor Air/Environment Violations of Ch. 3, e.g. mold, fumes from business activities affecting adjacent properties	125	54	83	62	98	46
Noise Violations of Ch. 31B, e.g. construction noise, HVAC equipment	248	66	262	54	246	44
Illegal Dumping Violations of Ch. 48, e.g. dumping of scrap tires, bags of trash	418	37	492	38	380	34
Water Quality Violations of Chapter 19, e.g. disposal of oil in storm drain, chemicals in stream	210	77	279	43	314	59
Grand Total	1,364	53	1,386	41	1,292	35

Story Behind the Performance

DEP is responsible for enforcing the County's environmental laws and regulations, including those related to air and water quality, illegal dumping, and noise. Approximately 1,700 new cases are opened each year and arise from either: (1) inquiries and complaints from citizens related to the potential violation of County law or regulation; or, (2) routine activities conducted by staff in support of County law, regulation or permit requirement (e.g., investigating sewer system overflows, monitoring storm drain outfalls for the NPDES permit, visiting retailers to discuss County's pesticide law).

There has been a 34% drop in the average number of days to close environmental enforcement cases over the last three years.

What constitutes good performance for this measure?

Reduction in days required to reasonably and comprehensively resolve cases.

Contributing Factors

- Good procedures in place to track calls, e-mails and other communications regarding code enforcement cases
- Full complement of experienced staff
- Clear, effective laws and regulations

Restricting Factors

- Complexity of certain issues
- Limited public awareness of County environmental regulations
- Land use policies (denser development results in more activity and noise in smaller areas, and therefore generate more citizen complaints)

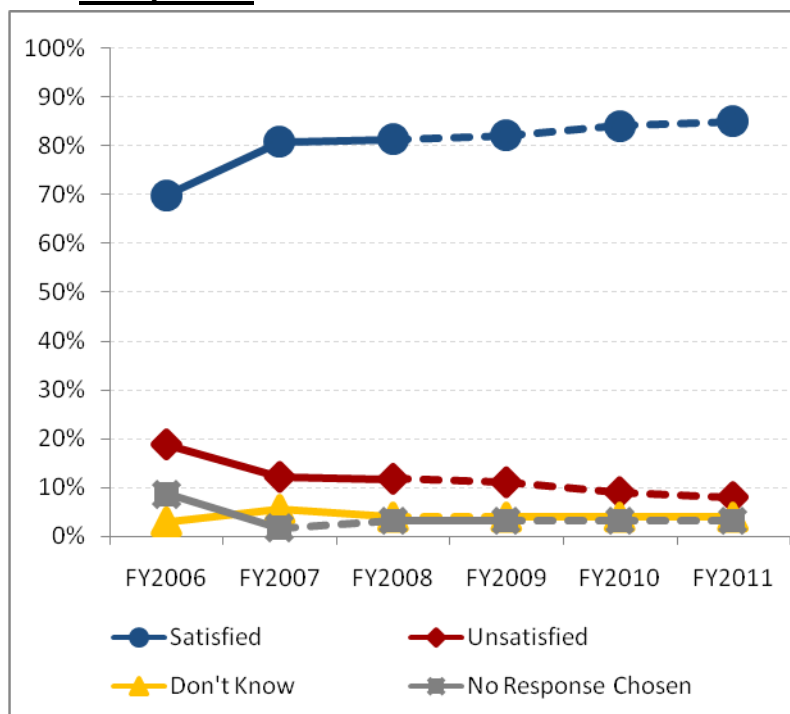
What We Propose To Do To Improve Performance in the Next Three Years:

- To the extent feasible, enhance database used to track enforcement activities to allow for better analysis of performance and identification of opportunities for improvement
- Continue to train staff
- Address deficiencies in laws and regulations that create enforcement issues (e.g. develop regulations for certain noise related activities as provided for in County Code.)
- Publish revised DEP Web site with clearer complaint hotlines in coordination with County's 311 Access system, explanations of environmental codes, and directions for reducing infractions of the County's environmental code.

Innovations (Proposed)

- Use GIS technology and staff training to map historical compliance data to better match complaints against state databases of permitted dischargers, and conduct better geographic targeting of problems.

Measure 4: Percent Customers Satisfied with DEP Response to Environmental Complaints



DEPC Customer Survey Data

	FY 06	FY07	FY 08
Total Mailed	513	624	596
Total Returned	139	182	128
Response Rate	27%	29%	21%

Story Behind the Performance

Satisfaction surveys are mailed to each complainant to determine his/her satisfaction with DEP's response and handling of the situation. Customer satisfaction with DEP's response to environmental complaints has increased 14 percent over the last three years.

Surveys are sent out at the end of each month for cases closed during the month to complainants who initially alerted DEP to the potential offense (if they provided their address).

What constitutes good performance for this measure?

Maximizing percentage of customers satisfied with DEP response

Contributing Factors

- Good procedures in place to track calls, e-mails and other communications regarding code enforcement issues
- Staff ability to respond to the complaint in a timely fashion
- Good communication and dispute resolution skills even when the outcome is unfavorable to complainant
- Clear, effective laws and regulations

Restricting Factors

- County Code may prevent DEP from acting to the complainant's satisfaction and the complexity of certain issues may not be understood by complainant. The response provided by a customer may reflect the respondent's satisfaction with the resolution of a case rather than the manner in which DEP staff performed.

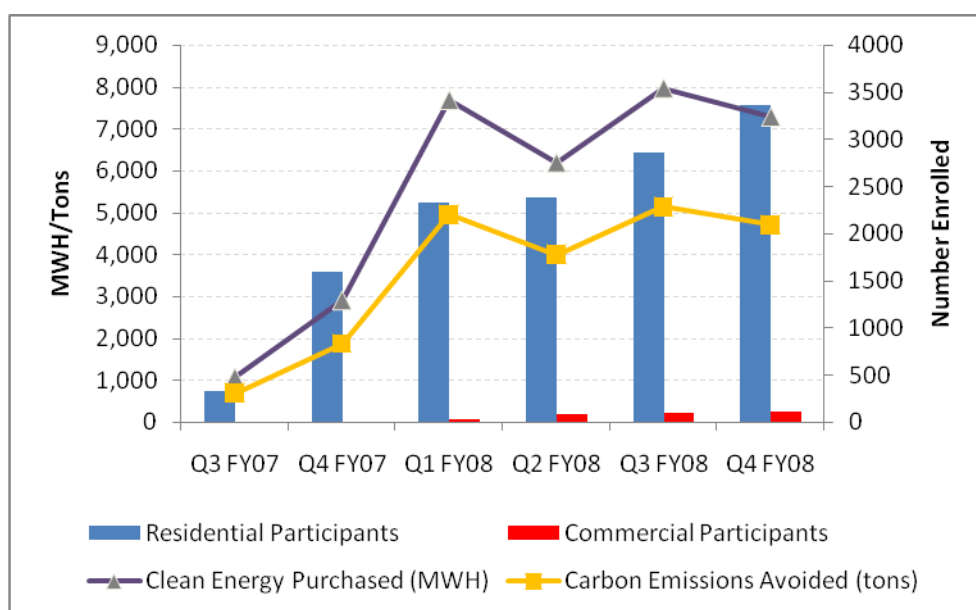
- Land use policies (denser development results in more activity and noise in smaller areas, and therefore generate more citizen complaints)

What We Propose to Do to Improve Performance in the Next Three Years:

- Continue to emphasize good customer service, public outreach and education, and constant and open communication with parties involved in enforcement cases. In many cases, constant communication and education with affected parties regarding the status of a case will lead to satisfied customers even if the resolution was unfavorable to them.
- Revised DEP Web site to lay out issues regarding environmental nuisances and complaints more clearly, to help educate and inform citizens.
- Enhance the database (to the extent possible) to better track and record information on enforcement cases and to determine if modifications would allow for better communication, faster response time, and a better understanding of issue trends.

C. Environmental Program Development Measures

Measure 5: Carbon Emissions Avoided Through Clean Energy Rewards Program



Story Behind the Performance

The Clean Energy Rewards Program provides a monetary incentive to County residents/businesses to purchase clean energy by offering an offset of some of the increased cost of clean energy. Each megawatt hour of 'clean' electricity purchased results in 1,293 lbs of carbon dioxide emissions avoided. This new program does not have historical data.

The Clean Energy Rewards program is one of the most cost effective programs developed by the County to reduce greenhouse gas emissions and improve local air quality. A general measure of the cost effectiveness of a carbon reduction program is the cost of the program per ton of carbon removed or avoided. Based on historical data, the Clean Energy Rewards program's cost-effectiveness is approximately \$15/ton of CO₂ avoided. In comparison, the County's clean energy purchases is

approximately \$35/ton, and the purchase of a hybrid car is in the range of \$250/ton. The cost effectiveness of the program is projected to increase this year, due to modifications of the program parameters.

What constitutes good performance for this measure?

Maximizing carbon emissions reductions and increasing the number of participants

Contributing Factors

- Establishment of program parameters that take advantage of market conditions
- Effective marketing and public outreach
- Development of good relationships with clean energy providers

Restricting Factors

- Cost premium of clean energy
- Variability of weather and other factors beyond DEP's control

What We Propose to Do to Improve Performance in the Next Three Years:

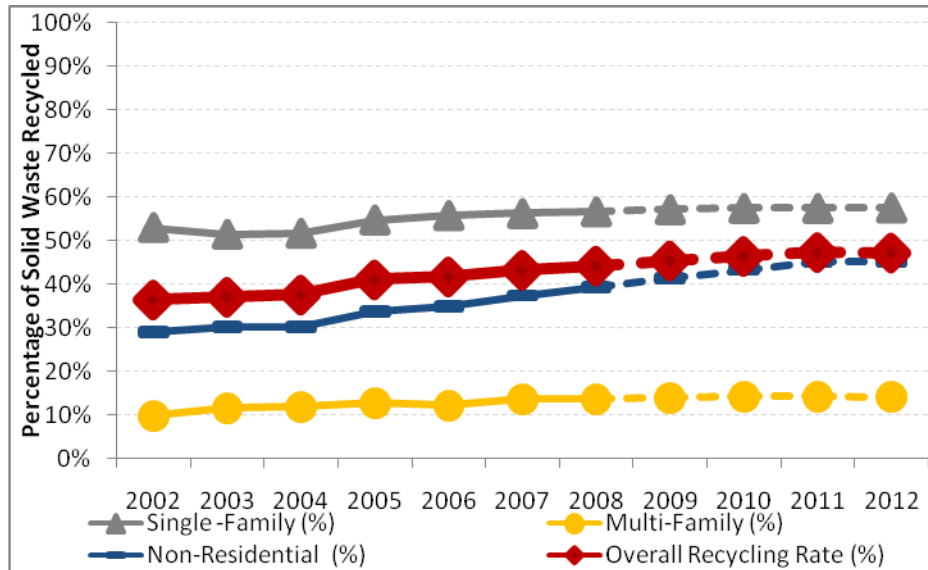
- Continue to explore opportunities to modify program parameters to take advantage of market conditions by expanding the location of clean energy generation from regional to national sources. (This helps to lower the price of clean energy promoted through the program)
- Adding methane digesters from landfills and waste water treatment plants to the list of eligible renewable energy resources
- Explore additional opportunities to market the program

Innovations (Existing)

- This is the only program of its kind in the nation and has won a National Association of Counties (NACO) Innovation Award.
- It is receiving particular notice for being a cost-effective way to achieve significant, widely-based carbon emission reductions.
- In the second year of the program DEP revised the incentive rate from one cent to half a cent (lowering the incentive provides value to participants while allowing more residents and businesses to join the program).
- Increased the sources of clean energy used in the incentive to include less expensive national sources.

D. Solid Waste Services Measures

Measure 6: Percentage of Total Municipal Solid Waste Recycled



Story Behind the Performance

The County has a goal of recycling 50% of all waste generated by 2010. Recycling is mandated by Executive Regulation 15-04AM, which requires recycling throughout the single-family, multi-family and commercial sectors. The comprehensive strategies and initiatives to reach the 50% recycling goal include a combination of outreach, education, technical assistance, training, as well as enforcement.

What constitutes good performance for this measure?

Increases in the percentage of waste that is recycled across all sectors.

Contributing Factors

Residential Recycling:

Outreach and education motivating people to recycle more.

Well-functioning collection services provided by the County

Commercial/Multi-Family Recycling:

Outreach and education motivating businesses and tenants to recycle more

Enforcement and site visits to reinforce educational measures

Technical assistance & training to reinforce recycling behavior

Restricting Factors

Residential Recycling:

Language barriers and cultural differences

Competing household priorities

Commercial Recycling:

Multiple parties in custody chain

Recycling collections services hired by the business itself

Multi-Family Recycling:

Language barriers and cultural differences

Resident/manager/concierge turnover services

Recycling collections services hired by the manager of the building.

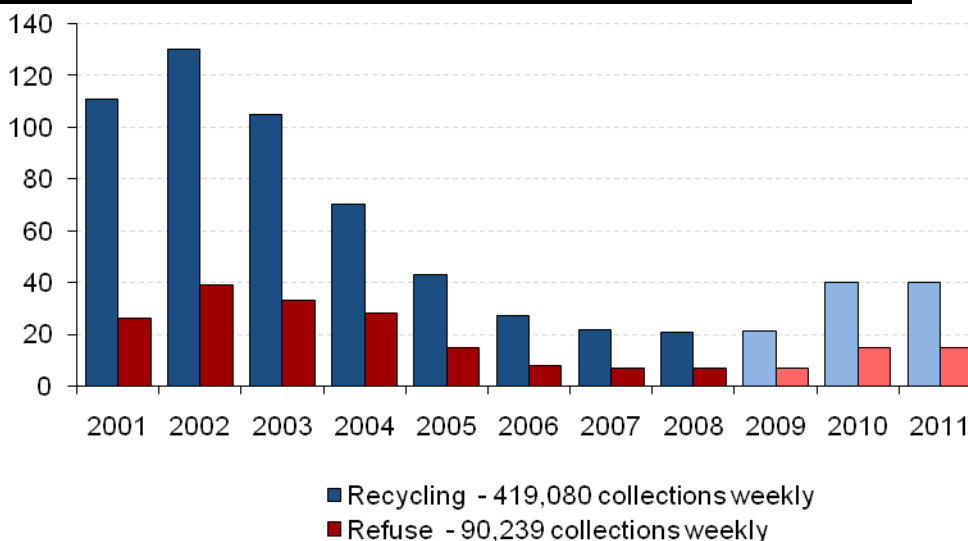
What We Propose to Do to Improve Performance in the Next Three Years:

- Continue and expand focused efforts to increase recycling in the multi-family and commercial sectors. Based upon waste generation data and current recycling achievement, the commercial sector provides the greatest opportunity to increase the amount of materials recycled.
- Continue providing education, outreach, training, technical assistance, and guidance across all sectors to single-family and multi-family residents, multi-family property owners, managers, condominium and common ownership community boards, and businesses including business owners, managers, commercial property owners, property management companies, employees, commercial service providers, and refuse and recycling collection companies to further increase participation in recycling, waste reduction and buying recycled programs.
- Continue to provide comprehensive level of outreach, education, training, technical assistance and site-specific recommendations to businesses and multi-family properties to implement, improve or expand on-site recycling programs through the use of on-site visits by staff.
- Continue dedicated enforcement of the County's recycling regulation, Executive Regulation (ER) 15-04AM as it pertains to businesses and multi-family properties by thoroughly investigating cases of non-compliance.

Innovations (Existing)

- Expand efforts to further implement cooperative recycling and refuse collection programs among businesses in the Central Business Districts. Data has shown that when businesses that generate similar types of waste contract their recycling and refuse collection services together with one collection service provider and share a common set of recycling and refuse collection containers, the businesses increased the amount of materials they recycle and the majority of participating businesses have seen a decrease in their monthly recycling and refuse collection service costs due to collection efficiencies.
- Increase items that are recyclable: expanded plastics, TV's, Computers and all small electronic devices and expanded recycling to all County facilities.
- Improved recycling rates (525,000 tons of MSW in FY'07) reduces our carbon footprint.

Measure 7: Average Number of Collections Missed Per Week



Story Behind the Performance

There has been a steady decline in the number of missed collections for both recycling and refuse collection.

DEP collects trash from approximately 40 percent of the residents in the county and recyclables from every household (excluding municipalities) using contractors. For collection purposes, the county is divided into 13 areas. Each area is further subdivided into routes receiving collection on a specific day of the week. The routes are predictably run by the collectors so each resident receives collection approximately the same time on their assigned collection day. DEP's goal is to make sure materials are collected promptly and in all cases on the same day. If a residents trash or recyclables are not collected on the same day it is recorded as a "missed collection". The "missed collections" are tracked to quantify both contractor performance and DEP's effectiveness as a contract manager.

What constitutes good performance for this measure?

Decrease the number of missed collections

Contributing Factors

- Quick response time (call center & field staff)
- Educated residents and collectors

Restricting Factors

- Periodic new contract start-ups
- Contractor's inability to hire and retain staff

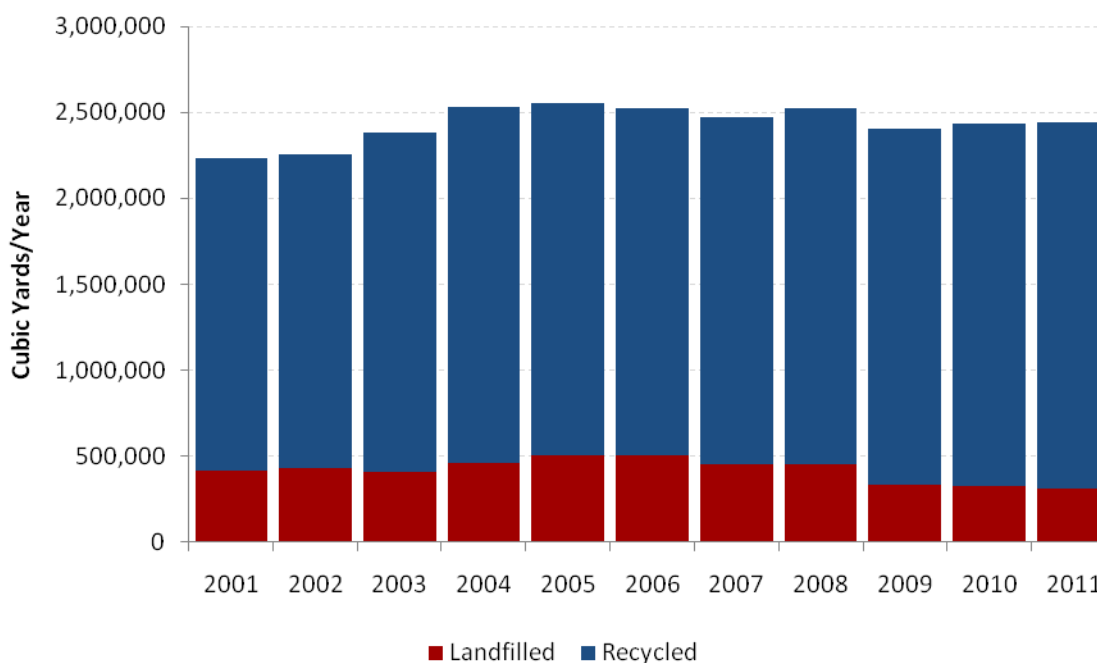
What We Propose to Do to Improve Performance in the Next Three Years:

- Improve dispatch and response time to resident's same day collection complaints to avoid those being converted into misses.
- Work closely with contractors to know when substitute crews are on trucks as that is when misses occur most frequently.
- As we transition contracts in each area we will shift field staff presence to monitor performance during start-up weeks.
- Conduct outreach to residents regarding acceptability of materials for collection and when material must be out for collection.
- Review material acceptability with contractors on a regular basis so acceptable material isn't rejected and then called in as a miss by a resident.

Innovations

- Expanded use of laptops by Field Staff to receive miss and same day complaints live and have them close those tickets in the field once a resolution is achieved.
- Develop a Recycling and Refuse Rules brochure to distribute to residents to ensure everyone receiving County service knows what is acceptable for collection and how to prepare material as needed.

Measure 8: Volume of Landfill Space Not Utilized



Red: Landfilled Blue: Space saved due to recycling and RRF processing.

Story Behind the Performance

As a result of Montgomery County's programs to recycle, grasscycle, and convert refuse to energy. Only a small percentage of municipal solid waste is landfilled.

What constitutes good performance for this measure?

Decrease percentage of landfill space used

Contributing Factors

- The County's successful recycling program
- Volume reduction through energy conversion
- Reduced waste generation in the County
- Increased number of patrons using the HHW facility, from 10,000 in FY 00 to over 80,000 in FY 08.

Restricting Factors

- Lack of a market for recycled ash
- Outside forces drive generation (e.g. packaging, economy, etc.)
- Other than by adjusting its Tipping Fee the County has limited influence over where private sector collectors choose to take their waste

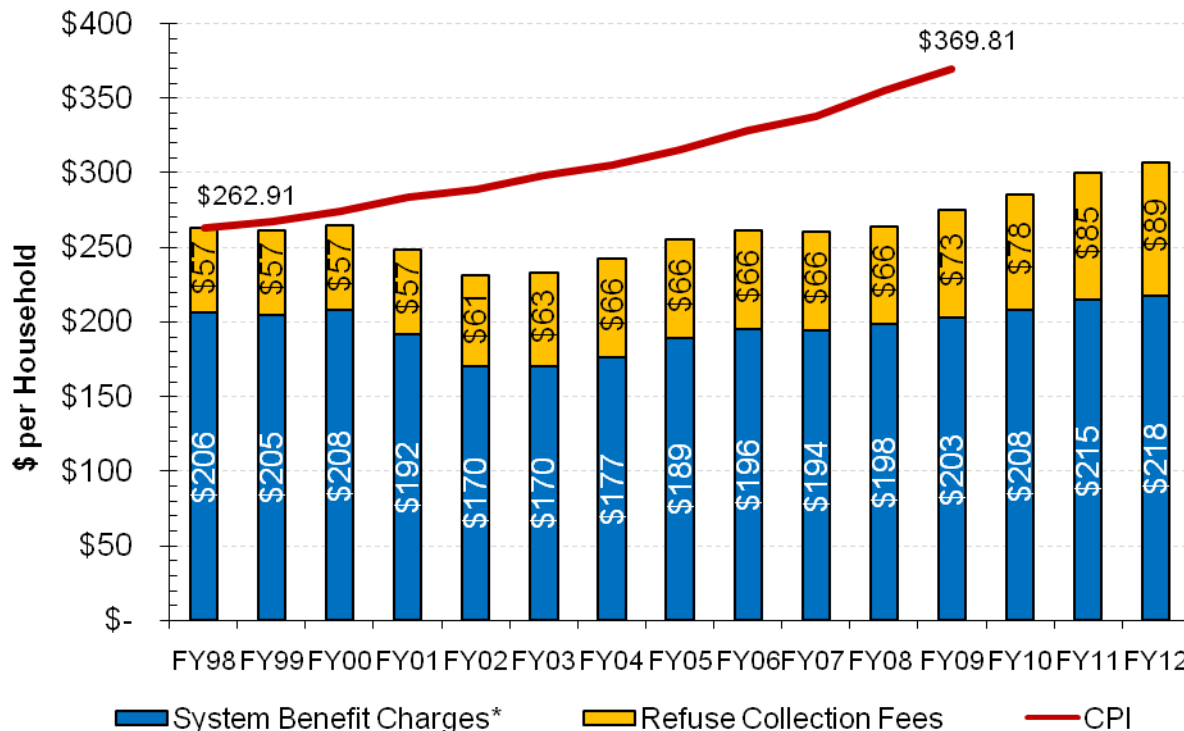
What We Propose to Do to Improve Performance in the Next Three Years:

- Increase recycling
- Research the market for sound uses of recycled ash.
- Discourage the use of our Resource Recovery Facility (RRF) for disposal of construction and demolition-generated waste.

Innovations

- Utilized co-operative collection programs for small businesses to increase recycling and reduce their trash volume.
- Established a Web-based used cooking oil exchange to connect “users with disposers”
- Increased items that are recyclable: expanded plastics, TV’s, Computers and all small electronic devices.
- Increase future recycling innovations

Measure 9: Single-Family Solid Waste Charge



FY98 Adjusted to FY09 by Baltimore-Washington Area CPI Actuals = \$369.81 . *This measure does not include Leaf Vacuuming which is administered by DOT and funded by DEP

Story Behind the Performance

The Solid Waste Enterprise Fund was established by law to account for all revenues and expenditures of the integrated solid waste management system. The System Benefit Charges and Collection Fees are collected on the property tax bills. Rate-setting methodology is used to ensure that fees and charges are calculated to reflect as fairly as practicable the costs to the County of providing solid waste services. There has not been a corresponding increase in the single family waste charge as the Consumer Price Index has continued to rise.

What constitutes good performance for this measure?

Maintain low rates with enhanced services

Contributing Factors

- Landfill, gas-to-energy project
- Institute Low NOx project
- Expanded Transfer Station tipping floor, increased safety, and reduced customer wait time
- Instituted full time Household Hazardous Waste Drop
- Customer increase from 10K (FY00) to 80K per year (current)
- Innovative approaches to reducing cost and increasing revenues

Restricting Factors

- Increases in fuel and labor costs
- Changes in commodity markets

What We Propose to Do to Improve Performance in the Next Three Years:

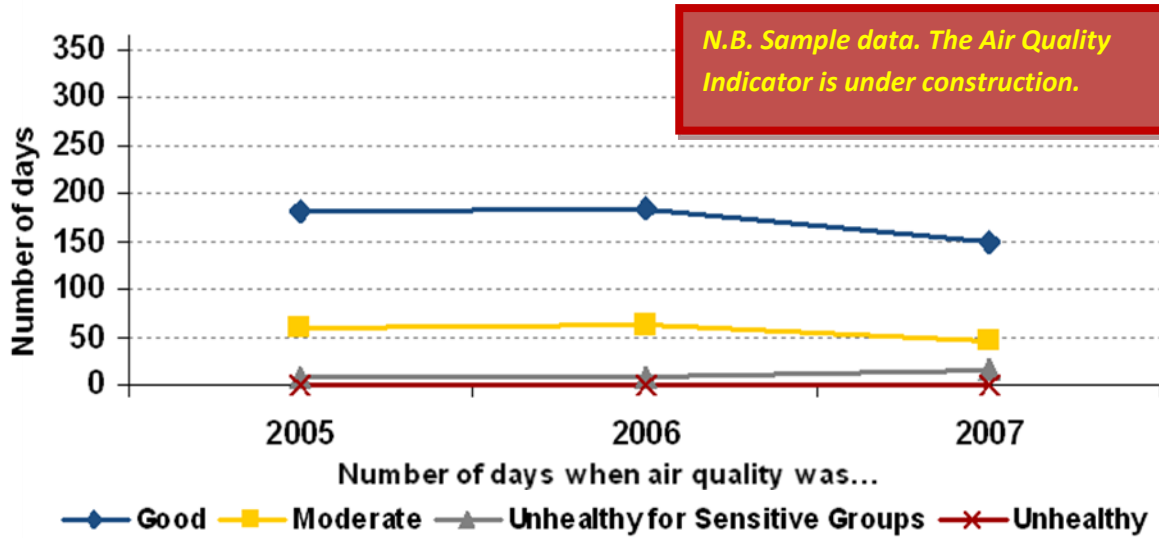
- Maintain the Solid Waste Enterprise Fund's current and six-year projected fiscal health goals while practicing prudent financial management.
- Enhance reporting using crystal reports software to ensure all solid waste tonnages received by DSWS are accounted for, and that all applicable tipping fees are collected.
- Continue benchmarking with other similar jurisdictions with regard to fees charged and services rendered to ensure DSWS is delivering the best service in a cost effective manner.
- Continue rate model enhancements, and rate stabilization over the six year planning period to ensure our customers (citizens) are charged an equitable fee for service.
- Maintain accountability and transparency in financial reporting during public disclosure to ratepayers.

Innovations

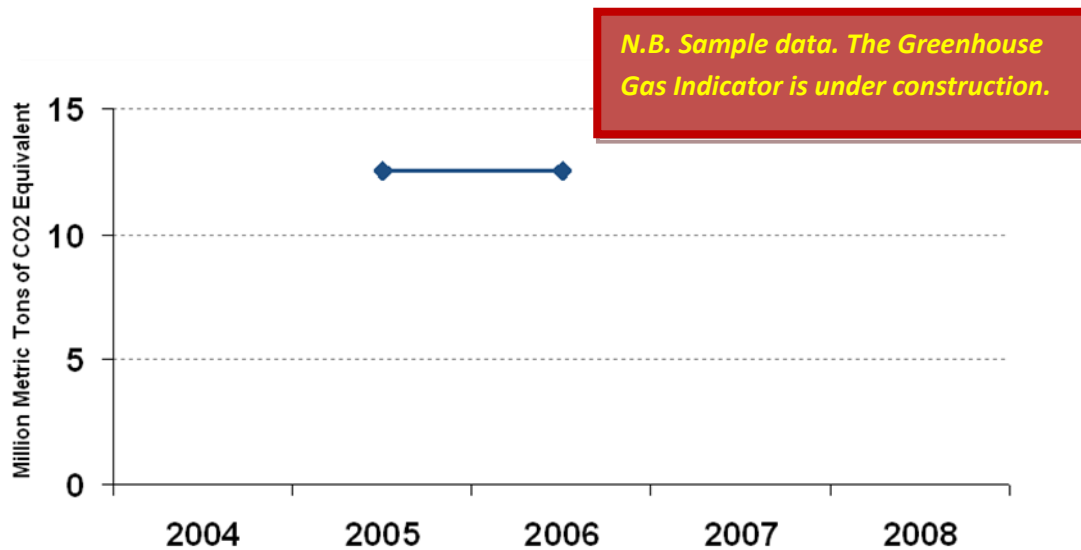
- Develop enhanced exception report showing real-time updates to the customer or State Department of Assessment and Taxation (SDAT) database(s) to ensure all customers are properly billed for solid waste services rendered.
- Develop revenue report using Crystal Reports software showing the break-out of the different systems benefit charges to ensure all fees received by the County are properly recorded to disposal activities. This report will improve revenue projections and strategic planning for fiscal decision making.

E. Environmental Policy Development and Support

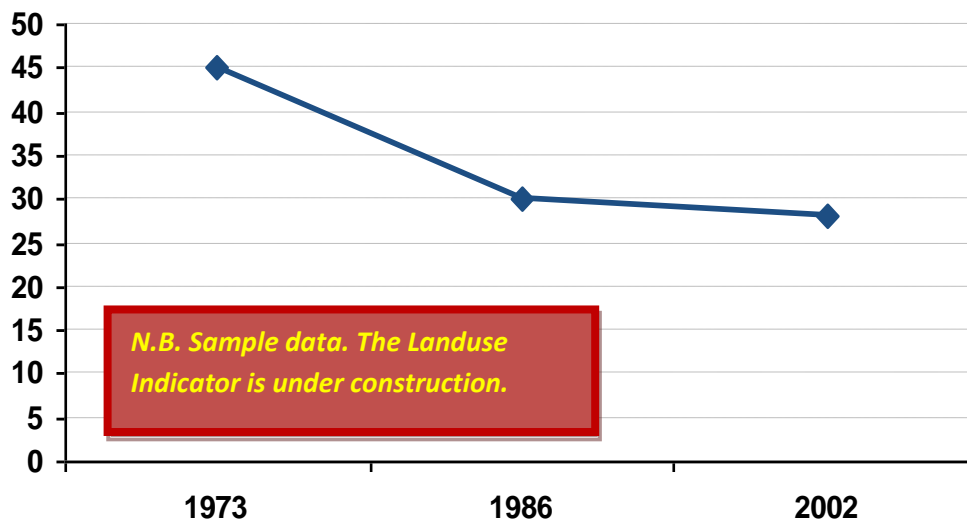
Indicator 1: Air Quality Condition by Annual Number of Days



Indicator 2: Greenhouse Gas Emissions Reductions



Indicator 3: Percent County with Forest Cover



Story Behind the Performance

DEP plays both lead and supporting roles with respect to policy development on environmental issues affecting the County and County government. DEP staff act as liaisons and representatives for the County on various technical committees, intra-governmental panels, and coalitions dealing with environmental initiatives at the regional, state and federal level. DEP provides technical support and facilitation services to special committees, working groups, and County Council. Additional policy guidance is provided by DEP when implementing and interpreting legislation on environmental issues including landuse, water resource infrastructure, long-term sustainability, and energy policy.

DEPs ultimate influence on the environment, however is limited by external variables beyond its control (e.g., population growth, personal behaviors, climate change, regional airsheds, pre-existing or legacy conditions, neighboring jurisdictions' policies, and lag times in impacts).

The reorganization of DEP to include the Division of Solid Waste Services (DSWS) in FY08 provided an opportunity to continue DSWS' excellent environmental performance and its alignment with environmental goals of improving air quality and water quality, and reducing greenhouse gas emissions and fossil-fuel consumption.

The three indicators listed in this plan (E-1.– E-3.) on air quality, carbon emissions, and forest cover are high-level indicators of the condition of the County's environment. Tracked over time, we expect these indicators to document improvement in the County's environment, resulting from, in part, DEPs contribution to policy development and implementation.

What constitutes good performance for these indicators?

- Greater number of days with 'good' air quality
- Trend lines showing that greenhouse gas emissions from all sources in the County are declining
- Increasing the tree canopy

Contributing Factors

Air Quality/Greenhouse Gases (Indicator to be Developed)

- Effective technical assistance to Department of General Services (DGS) on pollution reduction from operations and reducing emissions from the County fleet.
- Good coordination with DOT to implement measures to reduce ozone-precursors on forecasted Air Quality Action Days including highways signs, postponing mowing on County right-of-ways, etc.
- Good coordination with Ride-On to offer free rides for County residents on forecasted Air Quality Action Days.
- Strong partnership with Clean Air Partners to offer region wide rebates to auto repair shops and printers to switch to aqueous parts-washers which reduces volatile organic compounds—an important precursor to ozone.
- Effective representation at
 1. Metropolitan Washington Council of Governments' (MWCOC) Intergovernmental Green Building Group to develop policy recommendations on regional green building initiatives and coordinate green building issues among local jurisdictions.
 2. Maryland Commission on Climate (Technical Working Group), on energy supply, forest conservation, transportation and landuse.
 3. Climate Communities, a coalition of local governments advocating for a greater share of federal resources for local climate-related programs
 4. International Council for Local Environmental Initiatives, an organization to help local jurisdictions develop climate plans, and facilitate the exchanges of best practices.
 5. MDE's Regional Greenhouse Gas Initiative Stakeholder meetings.
- Fueled the entire fleet of off-road equipment at the Solid Waste Services Compost Facility with B20/B5 (diesel mixed with 20 percent or 5 percent ethanol) since May 2007. This reduces emissions and exhaust in terms of particulates, hydrocarbons, carbon monoxide and carbon dioxide.
- Modified/expanded the Solid Waste Services Transfer Station (Derwood, MD) in FY08. Modifications reduced the vehicle wait/idling time for over 400,000 vehicles per year. During peak times, the wait time dropped from approximately 30 minutes to under 5 minutes, reducing emissions.
- Increased the volume of yard trim hauled by train vs. truck from 19 percent in 2001 to 48 percent in FY 2008.
- Used rail transport for 85 percent of solid waste handled by Solid Waste Services, reducing dependence on trucks running through the neighborhoods.
- Captured and destroyed methane, via flaring, generated by the landfills at Oaks and Gude.
- Established a Web-based, used cooking oil exchange to connect users with disposers.
- Established a Green Business Certification program to encourage County business to improve environmental performance (in recycling, emissions reductions, use of clean energy, use of less toxic materials, energy efficiency, etc.). This program is also aimed at increasing the green technology sector in the County.
- Chairing, and facilitating a Sustainability Working Group comprising County-wide expertise in business, communications, land use/building, clean energy, water quality, and habitat protection. The Group will focus on a variety of climate change related initiatives as outlined in County Bill 32-07, including development of a Climate Protection Plan.

Land Use/Water Resources and Infrastructure (Indicator to be Developed)

- Good partnership with Department of Economic Development on projects that require technical expertise in the areas of contaminated sites, waste management businesses, site development and/or water and sewer services.
- Providing good technical review, assessment, and professional judgment-based recommendations on regional water and sewer planning aspects of the master plan process, extension of water and sewer services based on the water and sewer plan, policy proposals, development of the Montgomery County Comprehensive Water Supply and Sewerage Systems Plan (Water and Sewer Plan), development of the WSSC Capital Improvements Plan, facility planning, capacity planning, and regional optimization and planning to:
 - (i) District of Columbia Water and Sewer Authority (D.C. WASA). Montgomery County has two seats on the eleven-member Board of Directors.
 - (ii) MWCOG. Support COG members including Council members and the County Executive with coordination of regional policy. An example is the implementation of Chesapeake Bay policies.
 - (iii) Interstate Commission on the Potomac River Basin (ICPRB) and other regional governments and utilities. Montgomery County must coordinate with these outside bodies on water supply quantity and quality issues.
- Provide recommendations and technical/financial analysis to Office of Management and Budget (OMB) in the review and development of the WSSC Capital Improvement Programs and Operational Budgets. This includes coordination with, and recommendations on the Council's Spending Affordability Process, and policy and budget reviews.
- Partner with DPS' Well and Septics Program to
 - (i) evaluate failed wells and septic systems
 - (ii) replace failed systems with community water and/or sewer services
 - (iii) coordinate in the development of sanitary surveys to identify areas of the county that need community water or sewer services.
- Provide policy and technical input to the Office of Inter-Governmental Relations to work with state and federal legislative representatives to adopt laws that promote Montgomery County's ability to protect and improve water resources and water quality.

Restricting Factors

- Infrastructure development depends on rates paid by WSSC's customers.

Innovations (Existing)

- Currently revising DEP's public Web site to solicit citizens directly to help DEP through personal behaviors that improve and protect the environment (e.g., reduce trash, limit driving, increase recycling, conserve energy at home, etc.). These direct appeals to personal behavior modification address a significant influence on DEP's performance measures as laid out in this document.
- Installing the latest technology available at the RRF to reduce NOx emissions by 50 percent.
- Generating clean, renewable electrical energy by burning landfill gas generated by the landfills at Oaks and Gude.
- Using the collection contract bidding process to encourage contractors to propose environmentally-friendly alternatives.
- Improving coordination with DOT's Street Tree Program to implement guidelines developed by DEP for selecting and prioritizing planting sites to increase canopy coverage in watersheds to improve water quality, stream biology indicators, and air quality.

- Established a prototype process using satellite imagery classification methods to accurately evaluate the extent of tree canopy in the County.
- Launching the Montgomery County Green Tech Initiative together with Department of Economic Development (DED) to develop a comprehensive initiative to advance research and development into green technologies, grow and attract businesses providing green products and services, and create new green jobs. As part of this initiative, both Departments are developing Task Forces on Green Tech and Resource and Partnership, to bring academic institutions, businesses and other stakeholders together. DED has awarded a contract to develop a comprehensive “10 Point Green Tech Plan” to inventory the County’s existing assets and chart a course towards a more robust green technology sector.

Addendum: Key Partnerships and Collaborations

A. County Agencies

For All County Agencies

Solid Waste Services provides technical assistance, training, education, and recommendations for improvement on waste reduction, recycling and buying recycled products initiatives and programs for all County agencies and facilities.

Department of Transportation

Highway Services:

- Coordinate the inspection/maintenance on the stormwater management facilities within the County roads right-of-way.
- Coordinate street tree program to implement guidelines developed by DEP for selecting and prioritizing planting sites to increase canopy coverage in watersheds to improve water quality, stream biology indicators, and air quality.
- Solid Waste Services coordinates rate development/budget approval to provide for Leaf Vacuuming.

Traffic Engineering and Operations:

- Coordinate the implementation of low-impact development stormwater controls within the County roads right-of-way.
- Implement measures to reduce ozone-pre-cursors on forecasted Air Quality Action Days including highways signs, postponing mowing on County right-of-ways, etc.

Ride-On:

- Coordinate with Ride-On to offer free rides for County residents on forecasted Air Quality Action Days.

Capital Development Division:

- Coordination on the technical planning and design, construction, of new stormwater facilities on proposed roadways and other projects
- Coordination on erosion complaints and stream restoration projects when damaged storm drain infrastructure is involved
- Coordination on low impact development projects (such as bioswales and native plants to capture and treat stormwater at the source) in the public right-of-way

Department of Permitting Services

- Coordinate technical assistance and information on the permitting, planning and design of stormwater facilities.
- Provide technical information, review the data from a facility, and coordinate the process of conversion from a sediment retention facility to a stormwater facility.
- Coordination on watershed studies and other watershed restoration related issues, including implementation of the NPDES permit with respect to construction site management and practices.

Libraries

- Coordinate the implementation of low-impact-development stormwater management on library properties (Aspen Hill Library, Kensington Park Library)
- Solid Waste Services provides technical assistance, training and education on recycling initiatives in libraries.

Montgomery County Public Schools

Solid Waste Services provides technical assistance, training and education on waste reduction, recycling, and buying recycled products to MCPS.

Division of Maintenance

- Responsible for inspection and maintenance of stormwater facilities on all public schools.
- Solid Waste Services is responsible for annual evaluation and provision of recommendations to improve recycling programs at all MCPS facilities.

Division of Construction

- Coordinate the implementation of low-impact-development stormwater management on school properties (e.g., Lux Manor Elementary School bio-retention area helps filter and treat runoff from the roadway and bus turnaround area before draining into the stormdrain system)

Health and Human Services

Office of Home Energy Programs

Provide education and coordinate programs for lower-income residents on energy

Inter-Agency Committee on Energy and Utilities Management

Chair committee consisting of all major County energy managers (WSSC, MCPS, HOC, etc.)

Department of General Services

Division of Capital Development:

Provide technical expertise on environmental site design

Facilities Management:

- Coordinate the implementation of low impact development (LID) stormwater management on retrofitting and refurbishment of existing County buildings (e.g., the County's Council Office Building is being retrofitted with a green roof.)
- Coordinate on the contract for inspection and maintenance of stormwater facilities, provide technical review and training, set schedule, and determine technical specifications of the maintenance operations.
- Solid Waste Services provides technical assistance, training, education, and recommendations for improvement on waste reduction, recycling and buying recycled products initiatives and programs for all County agencies and facilities under the services of Facilities Management.

Fleet Management Services:

- Provide technical assistance on pollution reduction from operations and reducing emissions from the County fleet.

- On watershed restoration projects, DGS provides contract management and construction management services for engineering and construction contracts.

Maryland-National Capital Parks and Planning Commission (M-NCPPC)

- Responsible for inspection and maintenance of stormwater facilities on all park lands in the County.
- Coordinate on watershed studies and restoration projects located on parkland.
- Coordinate on new growth policy and the master planning process and development through the Sustainability Working Group.
- Solid Waste Services provides technical assistance, training, education, and recommendations for improvement on waste reduction, recycling and buying recycled products initiatives and programs for all M-NCPPC facilities.

Department of Economic Development

The Montgomery County Departments of Economic Development (DED) is partnering with DEP to develop a comprehensive initiative to advance research and development into green technologies, grow and attract businesses providing green products and services, and create new green jobs.

Montgomery County Forestry Board

DEP works with the Montgomery County Forestry Board to develop and eventually will maintain a GIS-based inventory of champion and significant trees throughout Montgomery County. The Forest Conservation Law regulates protection of these trees.

Department of Housing and Community Affairs

Solid Waste Services coordinates and funds the Clean and Lien program which provides for the removal of dangerous or unsightly trash from properties which owners have failed to maintain.

F. State Agencies

For All State Agencies

Solid Waste Services provides technical assistance, training, education, and recommendations for improvement on waste reduction, recycling and buying recycled products initiatives and programs for all State agencies and facilities located in the County.

Maryland Department of Agriculture

DEP supports MDA on the Gypsy Moth Suppression Program to limit the damage by gypsy moth caterpillars on trees across the County. MDA implements a comprehensive state-wide program. Within Montgomery County, DEP contributes funds, GIS map layers, and staff support for surveys and outreach. In FY08, DEP implemented the same program as MDA on at the county level to treat additional acreage infested by gypsy moths that met MDA criteria for treatment but could not be treated by MDA due to lack of funds.

Maryland Commission on Climate

Technical Working Group works on energy supply, forest conservation, transportation and landuse

Maryland Department of Environment

- Air & Radiation Management Administration coordinates data and permit information with DEP.
- Mobile Sources Division retrofits diesel engines with clean diesel technology.
- DEP participates in Regional Greenhouse Gas Initiative Stakeholder meetings.
- DEP can tap MDE's enforcement resource in case of problems with permitted facilities.
- MDE provides significant (50-75%) grant funding for restoration projects and partners on the Anacostia watershed study.
- DEP provides stream monitoring data to MD DER for the Clean Water Act regulatory requirements of bi-annual reporting and impaired waters listing.
- Participates in regional discussion/solution of solid waste issues.

Maryland Energy Administration

Coordinate energy issues: renewable energy, energy management issues, and energy efficiency. DEP anticipates working with MEA on the new Maryland Clean Energy Center initiative.

Maryland Home Performance (Energy Star)

Marketing and deploying home energy audits and best practices to the community.

Maryland Department of Natural Resources

- Partners with DEP on the Anacostia watershed study
- DEP uses monitoring protocols developed by MD DNR to ensure integration with larger state databases.
- DEP and MD DNR collaborate through the Maryland Water Monitoring Council on science-based monitoring issues such as stream restoration effectiveness monitoring

MD State Highway Administration

Coordinate on ICC and ICC "Stewardship" and mitigation projects (many of these projects are from DEP restoration project inventory)

Northeast Maryland Waste Disposal Authority

Participates in regional discussion/solution of solid waste issues.

G. Regional Organizations

MWCOG

- Represent Montgomery County on the Energy Advisory Policy Committee regarding energy, and energy emergency and management issues.
- Represent Montgomery County on the Recycling Committee regarding waste reduction, recycling, and buying recycled products issues, and to discuss and address regional solid waste/recycling management issues.
- Represent Montgomery County on the Intergovernmental Green Building Group to develop policy recommendations on regional green building initiatives and coordinating green building issues among jurisdictions.

- Participate in meetings of the Air Quality Committee (Technical Advisory Committee). MWCOG provides support for regional air quality planning activities, producing the state implementation plan with input from local/state officials.
- Coordinate on Anacostia watershed activities through the Anacostia Watershed Restoration Committee

Anacostia Watershed Restoration Agreement

In 1987, the Anacostia Watershed Restoration Agreement was signed by the local, state, and federal agencies with land and management responsibilities in the Anacostia Watershed including Montgomery County. The Agreement provides a framework for the evaluation of pollution control efforts with regard to observed water quality and aquatic life benefits.

Bikes for The World

Bikes for the World (BFW) pick-up bicycles donated at the Transfer Station, refurbishes them, and distributes them throughout the world. The organization is located in Virginia and holds several events around the Metro area to get bicycles and funding.

Patuxent River Commission

Since its creation in 1980 by State legislation, Montgomery County has been a member of the Patuxent River Commission, an interjurisdictional group to address environmental protection issues throughout the Patuxent River watershed. The 930 square mile watershed is entirely within the State of Maryland and has been the focus of innovative policy, planning, and implementation efforts since 1980, beginning with a 'charrette' which resulted in the establishment of the State's first nutrient reduction goals for wastewater treatment plants.

Patuxent Reservoirs Watershed Protection Agreement

In 1996, recognizing the unique challenges of source water protection, Montgomery County joined Howard and Prince George's Counties, the Howard and Montgomery Soil Conservation Districts, the Maryland-National Parks and Planning Commission, and the Washington Suburban Sanitary Commission in signing the Patuxent Reservoirs Watershed Protection Agreement. The signatories committed to identify relative roles and responsibilities to protect the watershed, tributaries, river, and reservoirs in the Upper Patuxent. The signatories established six priority resources for protection: the reservoirs, the tributary streams, the aquatic life, the terrestrial habitat, the watershed's rural character and landscape, and the people in the watershed

Maryland Local Government Agreement for Chesapeake Bay Restoration

In 1992, the Chesapeake Bay Program completed its re-evaluation on status and trends in water quality of the Bay and its tidal tributaries and reaffirmed the 1987 Bay Agreement goals for 40% nutrient reductions. This led to the allocation of nutrient reduction targets among the signatory states and the Maryland Local Government Agreement. Originally signed by the Governor, Counties, and the City of Baltimore in 1993, this Agreement was updated in the year 2000 to outline commitments by the State and local governments to address the goals of the Chesapeake Bay Agreement at the local level. The Tributary Strategies Teams were established as a result of this Agreement. The County's NPDES Permit encourages the County to participate in the implementation of the Tributary Strategies.

Potomac River Watershed Trash Treaty

By signing the Potomac River Watershed Trash Treaty, Montgomery County along with other local jurisdictions in the region, committed to a Trash Free Potomac by 2013 by:

- Supporting and implementing regional strategies aimed at reducing trash and increasing recycling;
- Increasing education and awareness of the trash issue throughout the Potomac Watershed; and
- Reconvening annually to discuss and evaluate measures and actions addressing trash reduction.

Prince George's County Department of Environmental Resources

Partners on Anacostia watershed study

District of Columbia Department of the Environment

Partners on Anacostia watershed study

Clean Air Partners

Provide funding, participate in technical partnerships, receive regional air quality public education particularly on national air quality ambient standards, and outreach to reduce air pollution through voluntary actions.

Partner with Clean Air Partners to offer rebates to auto repair shops and printers to switch to aqueous parts washers which reduces volatile organic compounds —ozone precursors.

Project Reboot

Used computers are dropped off at the Transfer Station. Volunteers with Project Reboot refurbish and repair donated computers that are then given to social services agencies, local schools, nonprofit organizations, and families.

Climate Communities

Coalition of local governments advocating for a greater share of federal resources for local climate related programs

International Council for Local Environmental Initiatives

Overarching organization to help local jurisdictions to help develop climate plans, and facilitate the exchanges of best practices.

C. Federal Agencies

For All Federal Agencies

Solid Waste Services provides technical assistance, training, education, and recommendations for improvement on waste reduction, recycling and buying recycled products initiatives and programs for all Federal agencies and facilities located in the County.

U.S. Army Corps of Engineers

Partners on watershed studies and restoration projects in the Anacostia, Great Seneca Creek & Muddy Branch watersheds. U.S. ACE provides significant (50–65 percent) Federal cost-share funding for partnership projects

U.S. Geological Survey

Identified by the USGS as the sole mid-Atlantic local government agency to maintain and contribute gage data to the National Water Information System (NWIS). Collaborate on real-time gage data that meet local information needs.

U.S. Environmental Protection Agency

- Collaborate on monitoring of pollutant removal efficiency of stormwater best management practices, changes in the biological community due to landuse change, etc.
- Share data and resources, use ENERGY STAR publicity materials, promote ENERGY STAR-qualified products, participate in ENERGY STAR working groups (e.g., municipal group) to define new program options for local governments, residents and businesses.

National Park Service

Collaborate for the support and information needs for Rock Creek stream gage

National Oceanic and Atmospheric Administration

Enhance the involvement of federal agency tools and resources in local climate programs, e.g., DEP is exploring cooperation on a greenhouse gas emissions tracking tool called *Carbon Tracker*.

D. Commercial

For All Businesses and Organizations in the County

Solid Waste Services provides technical assistance, training, education, and recommendations for improvement on waste reduction, recycling and buying recycled products initiatives and programs for all businesses and organizations located in the County.

Commercial Firms

The following firms partner with DEP to provide Clean, Renewable Energy to citizens along with a subsidy paid by the County. Their help is crucial to implementing the unique funding and rewards aspect of the Clean Energy Rewards program.

- Washington Gas Energy Services
- Clean Currents
- Sterling Planet
- WindCurrent
- Coordinate with Pepco, Allegheny Power, BG&E on energy education and other energy issues in the County.